204.1 - Molecular Absorption (film, filter, solid, and solution forms)

204.1 - Molecular Absorption (film, filter, solid, and solution forms) The optical SRMs for spectrophotometry are certified transfer standards that fall into three general categories: transmittance, wavelength, and stray radiant energy; each of which addresses a specific instrumental parameter of an absorption spectrometer that must be in control for accurate optical transmittance measurements. To obtain optimum verification results, each SRM must be used within the specified range of conditions for which it is intended.

SRM 2009a Didymium Wavelength: SRM 2009a is now being supported by Calibration Service (Service No. 38061S). Click here for the NIST Calibrations web site: http://www.nist.gov/calibrations. SRM 2035a is an alternative.

SRM 2065 has been replaced by SRM 2035b.

For further information on filters are available:

SP 260-54 - Certification and Use of Acidic Potassium Dichromate Solutions as an Ultraviolet Absorbance Standard SRM 935 (August 1977).

SP 260-68 - Metal-On- Quartz Filters as a Standard Reference Material for Spectrophotometry SRM 2031 (April 1980).

Also see: Table 204.2 - Optical Properties

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	931h	935a	1921b	1928	1929	2031c	2034	2035b	2036
Description	**Liquid Absorbance Standard for Ultraviolet and Visible Spectrophotometry**	**Potassium Dichromate (Ultraviolet Absorbance Standard)**	**Infrared Transmission Wavelength/Wavenumber Standard**	**Infrared Specular High Reflectance Standard (Nominal Diameter 51 mm)**	**Infrared Specular High Reflectance Standard (Nominal Diameter 25 mm)**	**Metal-on-Fused-Silica Neutral Density Filters (250 nm to 635 nm)**	**Holmium Oxide Solution Wavelength Standard (240 nm to 650 nm)**	**Ultraviolet-Visible-Near-Infrared Wavelength/Wavenumber Transmission Standard**	**Near Infrared Wavelength/Wavenumber Reflection Standard**
Unit Size	**(set (12))**	**(15 g)**	**(1 card)**	**(disk)**	**(disk)**	**(set (3))**	**(Cuvette)**	**(each)**	**(each)**
Parameter	absorbance standard	235 to 350	3 µm to 18 µm	gold plated copper disk, 9.0 mm thick and 50.8 mm in diameter	gold plated copper disk, 3.0 mm thick and 25.3 mm in diameter	250 nm to 635 nm	250 nm to 650 nm	UV-Vis peak locations between 334 nm and 804 nm NIR band locations between 975 nm and 1945 nm	975 nm to 1946 nm

- Certified values are normal font
- Reference values are italicized
- Values in parentheses are for information only

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2082

Pathlength Absorbance Standards for Microliter Volume Spectrophotometers

(set of 3 vials)

pathlength absorbance

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- Reference values are italicized
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